New massive, eclipsing, double-lined spectroscopic binaries Cyg OB2-17 and NGC 346-13

Vanessa E. Stroud[1,2] , J. Simon Clark[1] , Ignacio Negueruela[3] , Daniel J. Lennon[4] , Christopher J. Evans[5]

1 - Open University, Milton Keynes, UK
2 - Las Cumbres Observatory, CA, USA
3 - Alicante University, Spain
4 - Space Telescope Science Institute
5 - UK Astronomy Technology Centre

Massive, eclipsing, double-lined spectroscopic binaries are not common but necessary to understand the evolution of massive stars as they are the only direct way to determine the masses of OB stars and therefore obtain mass-luminosity functions. They are also the progenitors of energetic phenomena such as X-ray binaries and γ-ray bursts.

We discuss results from photometric and spectroscopic studies of two binary systems: Cyg OB2-B17 which is a semidetached binary located in the Cyg OB2 association and comprised of 2 O supergiants; and NGC 346-13 which is a system located in the Small Magellanic Cloud and comprised of a semi-evolved B1 star and a hotter, optically fainter secondary, suggesting mass transfer in the system.